



Published weekly for employees of Lawrence Livermore National Laboratory

Friday, August 13, 2004

Vol. 29, No. 32

Driving toward the future



JACQUELINE MCBRIDE/NEWSLINE

Left to right, Mark McCuller, Jim Fugina, Francisco Espinosa-Loza and Tim Ross discuss the insulated fuel storage system that sits in the back of a hydrogen-powered pickup truck.

By Charles Osolin

NEWSLINE STAFF WRITER

If you happened to spot a white-and-blue pickup truck hauling a cylinder of hydrogen around the Laboratory over the last few weeks, you might have been witnessing the future of motor vehicles.

In a major step toward the much touted “hydrogen economy,” Livermore researchers have developed a “hybrid” hydrogen fuel storage system that could ultimately replace gasoline-powered engines in cars and trucks.

The Lab has been working on alternative

See **HYDROGEN**, page 7

Greenville Road closure looms as Livermore readies for widening construction

By Anne M. Stark

NEWSLINE STAFF WRITER

Greenville Road could close as soon as Monday, Aug. 23, to make way for the City of Livermore Greenville Road widening and Union Pacific Railroad bridge replacement construction project.

Greenville Road, south of the National Drive intersection and north of the Marathon Drive intersection, will be closed for approximately 10 months.

The Lab’s Traffic Safety Committee will have a more detailed schedule including an exact date for closure by Tuesday, Aug. 17. The Livermore City Council awarded the construction contract on July 26.

See **GREENVILLE**, page 7

Health Services cautions employees about West Nile

By Keith Sheirich

HEALTH SERVICES

In an effort to keep employees informed of current health concerns, Health Services is providing information on West Nile Virus (WNV), a mosquito-borne disease first reported in the United States in New York during the summer of 1999. Since then the virus has spread westward to other

See **NILE**, page 7

Student scholars and fellows make real-life contributions toward homeland security

By Stephen Wampler

NEWSLINE STAFF WRITER

Lab homeland security researchers have received a helping hand this summer from some of the nation’s best and brightest university science students.

The students are working at the Laboratory for eight- to 10-week internships under the Department of Homeland Security (DHS) Scholars and Fellows Program.

Terry Brugger, a computer scientist in the Lab’s Information Operations Assurance Center, has supervised the work of two students, one a graduate student and the other an undergraduate student.

“The DHS internship program, both scholars and fellows, has succeeded in picking the cream of the crop,” Brugger said. “I think both of our students have

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SAILing into forensics to solve simulated crime

By Linda Lucchetti

NEWSLINE STAFF WRITER

Look out Hollywood. Move over CSI Miami. CSI Livermore Lab is here.

Local seventh- and eighth-graders had a chance to experience a simulated crime scene investigation (CSI) process and compare it to the “reel” version depicted on popular television shows. This month the students completed a week-long summer forensics program called “SAIL” (Science Adventure Institute at LLNL) at the Edward Teller Education Center (ETEC).

The SAIL program was a pilot-ed collaboration between ETEC and the Public Affairs Office. The forensics theme was added not only to

See **SAIL**, page 4



LESLIE SCHWARTZ/NEWSLINE

SAIL students carry out various experiments conducted by real crime scene investigators.



Fostering young minds

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More than green

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Scientists of the future

— Page 8



LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Friday
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The LLESA **Chinese American Networking Group** (CANG) has organized a dim sum excursion on Sunday, Aug. 15, from 11 a.m.-1 p.m. at the Willow Tree Restaurant, 6513 Regional Street, Dublin. Tickets are \$15 per person. Discounted children tickets are \$8 for 2 to 10 years old and \$5 for under 2 years old. To purchase tickets, contact Eric Chow, 2-0552, or e-mail Chow6@llnl.gov by today. Tickets are not available at the door.

Tuesday
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A **Fidelity retirement counselor** will be available today and Aug. 24 to assist with: assessing the current state of retirement accounts, learning how to diversify, planning asset allocation and identifying income strategies. Fidelity Investments Mutual Funds are available to UC's workplace retirement plan participants in addition to the UC-managed investments pools. If you would like to set up a consultation with a Fidelity representative, call 800-642-7131. When calling, be sure to specify that you are an LLNL employee.

Altamont Books will host an **author talk and book signing** today at 7:30 p.m. featuring James Dalessandro. He will discuss his book "1906," a novel about the 1906 San Francisco earthquake filled with historical detail and political corruption. He also will show a 20-minute segment of "The Damnedest Finest Ruins," a documentary he is producing and directing (with segments by Lucas Film and Matte World.). Altamont Books is located at 1601 Railroad Avenue, Livermore. For more information, call 443-4354.

Thursday
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Fidelity is offering an **estate planning workshop** today, from 9-10:30 a.m. in Bldg. 571, conference room 1335. Space is limited. Register for this workshop by calling 1-800-642-7131 (select option No. 2) and specify that you are an UC/LLNL employee. If you have any questions, contact the Benefits Office, 2-9957.

UP
&
COMING

The Amigos Unidos Hispanic Activities Group will again offer weekly conversational **Spanish classes** at the Lab. An information session is scheduled for Thursday, Aug. 26, at noon in Bldg. 415, room 239. Fall classes are currently scheduled to begin the week of Sept. 13. To sign up or just learn more about the classes, contact Pat Chance, 2-2807, or Kate Snyder, 2-4538.

Valley Concert Choral is seeking experienced choral singers with sight reading ability for the 2004-2005 season. The chorale rehearses Monday evenings. Season auditions will be held on Monday, Sept. 20 at the First Presbyterian Church, 4th and L streets, Livermore. For an appointment, call 462-4205.

Prostate cancer proposal receives funds

An LLNL proposal that screens African Americans at risk for prostate cancer (PC) has been selected for continued funding from the Office of the Congressionally Directed Medical Research Programs.

The 2004 Department of Defense Prostate Cancer Research Program's Idea Development Award proposal, "PSA-Based Screening Outcomes, Dietary Heterocyclic Amine Exposure, and Prostate Cancer Risk in African Americans," submitted in February 2004 by a multi-institutional team, is led by Ken Bogen in the Energy & Environment Directorate at the Laboratory who is also a member of the UC Davis Cancer Center. Garrett Keating of E&E is also a member of the team.

Other participating institutions and co-investigators are from the UCSF Medical School, Veteran's Administration Hospital in Sacramento and the Summit Alta-Bates Medical Center.

The new Department of Defense grant will extend and expand a five-year clinic-based study that was initiated in 2002 as one of several projects funded by the National Institutes of Health/National Cancer Institute. LLNL's project, "Determining the Carcinogenic Significance of Heterocyclic Amines," was led by Jim Felton of the Biology and Biotechnology Research Program.

The new work is a three-year prospective clinic-based survey to study the performance of a current versus a new highly specific clinical biomarker of PC risk in African American men, and to study the association of PC screening results for these men with their dietary exposures to cancer-causing chemicals that are created naturally within meat — especially in well done meat — as it is cooked. The study will help define the potential value of improved screening and dietary/behavioral intervention to reduce PC risk in this minority population, which continues to experience the greatest risk for this disease.

Volunteers needed for Expanding Your Horizons program

Would you like to help foster young women's interest in science and mathematics careers?

If so, consider volunteering for the 12th annual San Joaquin Expanding Your Horizons in Science and Mathematics™ Conference scheduled for Saturday, Oct. 2, at the University of the Pacific in Stockton. The following volunteers are needed for the planning stages of the conference, as well as the actual event day:

- Twelve computer technicians are needed to help support a computer-building workshop. For more information, contact Mike Barnett (barnett5@llnl.gov) at 2-9513.
- Workshop presenters are needed, who will briefly discuss background information about themselves, their education, how they chose their profession and what they do on the job.

Also, they will be asked to provide a hands-on experience or activity related to their job or profession.

- Committee members are needed to be part of the conference program, finance, food and fund-raising committees.

The University of the Pacific School of Engineering and Computer Science, the Laboratory and Sandia National Laboratories are sponsoring this conference.

Staff from these organizations will be on hand to help presenters prepare a workshop and will provide necessary equipment.

For information about the program or workshops, contact Gloria Murphy, murphy24@llnl.gov or (209) 914-2859, or Cary Gellner, gellner1@llnl.gov or 2-0643. For information about other volunteer opportunities, contact Yuki Ohashi, yohashi@sandia.gov or (925) 294-2393.

IN MEMORIAM

Harry West Jr.

Harry Irwin West Jr., a 44-year Livermore resident, died June 20. He was 78.

Born on Dec. 3, 1925, in Foley, Ala., he earned a bachelor's degree in chemistry and a master's degree in physics from the Alabama Polytechnic Institute.

After earning a doctorate from Stanford, he joined the Laboratory's radiochemistry division in 1955. He worked for 35 years at the Lab and was elected a fellow of the American Physical Society.

A life member of the Livermore-Amador Genealogy Society, he enjoyed researching family history. He also enjoyed skiing, backpacking, folk dancing and travel.

He is survived by his wife, Kip, of Livermore; his daughters, Karen and Elizabeth; his sons, David and Leonard; his sister, Anna; his grandson, Brandon; and his great-granddaughter, Melanie.

A memorial service will be at 11 a.m. Saturday, Aug. 14, at St. Bartholomew's Episcopal Church, 678 Enos Way, Livermore.

His family requests that donations be sent

to the Glaucoma Research Foundation, 4902 Post St., Suite 1427, San Francisco, 94102.

Newsline

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Designer: Julie Korhummel, 2-9709

Distribution: Mail Services at LLNL

Public Affairs Office: L-797 (Trailer 6527), LLNL, P.O. Box 808, Livermore, CA 94551-0808

Telephone: (925) 422-4599; Fax: (925) 422-9291

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Size matters when dealing with metals' strengths

By Charles Osolin

NEWSLINE STAFF WRITER

When it comes to determining the strength of metals and other inorganic material, size matters.

A new research technique developed by a team of researchers including LLNL engineer Jeff Florando has shown that the mechanical properties of nickel and some of its alloys — such as their ability to resist permanent deformation under stress — are directly affected by the material's dimensions. The research, reported in today's edition of the journal *Science*, suggests that as the size of a specimen shrinks to a few microns (millionths of a meter) or less, the mechanisms by which the sample deforms can be strongly affected.

"This finding is important because of the increasing use of materials with micron-size dimensions in the

miniaturization of electronic devices and other equipment," Florando said. "These physical conditions need to be taken into consideration when attempting to determine the strength of a given material."

Florando said the research team, led by Michael D. Uchic of the Air Force Research Laboratory in Dayton, Ohio, developed a new technique for testing materials at the microscale using a Focused Ion Beam microscope and a nanoindentation system to create and test micron and sub-micron scale compression samples.

"The advantage of this technique is that you can create samples in basically any inorganic material," Florando said. "The technique has shown that the strength or mechanical properties of a material can drastically change as you go to these smaller dimensions."

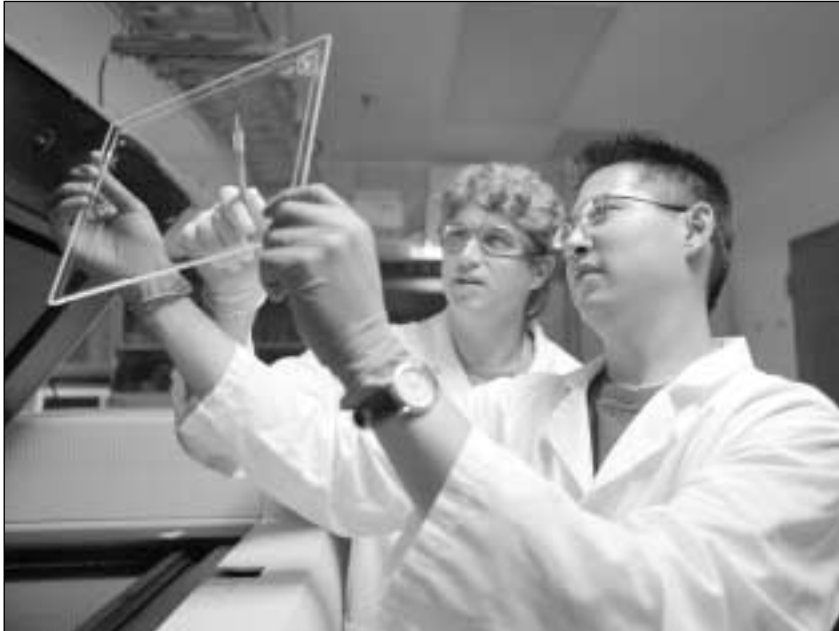
"Traditional materials science is based on changing the properties of materials by changing the chemistry or

internal microstructure of materials," he said. "Here we're simply changing the overall dimensions, and for some materials we're measuring dramatic differences in mechanical properties. Our understanding of deformation mechanisms at these small size scales is not adequate, and techniques such as this will help further our understanding."

Florando, an engineer in the Vacuum Processes Group in LLNL's Manufacturing and Materials Engineering Division said he helped with the research for the *Science* paper, "Sample Dimensions Influence Strength and Crystal Plasticity," while he was studying with William D. Nix of Stanford University's Department of Materials Science and Engineering. Also collaborating on the study, funded by the Air Force Office of Scientific Research, the Defense Advanced Research Projects Agency, the Department of Energy and the National Science Foundation, was Dennis M. Dimiduk of the Air Force Research Laboratory.



KATIE THOMAS/CHEMISTRY AND MATERIALS SCIENCE



JACQUELINE MCBRIDE/NEWSLINE

Left, materials scientist Joe Tringe mentors DHS fellow Asher Sinensky. Right, Brett Chromy is shown with DHS fellow Nate Chongsiriwatana.

SCHOLARS

Continued from page 1

worked out very well. I've been impressed with the caliber of their work."

Out of the 100 students participating nationwide in the scholars and fellows program, Livermore and Oak Ridge National Laboratory each have the most students working at their labs this summer with 15 each.

The goal of the internship program is to involve the students in research projects relevant to DHS missions and to foster a desire to contribute to homeland and national security. There are 50 scholars (undergraduate students) and 50 fellows (graduate students) in the program.

Two of the Lab's fellows, both third-year graduate students, Nate Chongsiriwatana in the Biology and Biotechnology Research Program and Asher Sinensky in Chemistry and Materials Science, are doing research in areas different from their graduate studies. But that hasn't dampened their enthusiasm for the program.

"The science in this Lab is really cutting-edge," Chongsiriwatana said. "Even though this research is different from what I'm doing in grad school, I've been exposed to other very valuable experiences. The tradeoff has definitely been worth it."

Sinensky agreed.

"I've enjoyed my internship more than I expected. I thought having to do an internship would slow me down from my research, but I've gained a first-class experience. The tradeoff has been worth it," Sinensky added.

A student at Northwestern University, Chongsiriwatana is studying chemical engineering.

In his DHS research, conducted under biomedical scientist Sandra McCutchen-Maloney, Chongsiriwatana has studied how blood proteins change upon exposure to pathogens in support of presymptomatic detection of disease.

"The DHS program is excellent, not only for the stu-

Students making real contributions towards homeland security

Probably the most important aspect of this year's Department of Homeland Security (DHS) Scholars and Fellows Program internships is that many of the students have made real contributions to homeland security projects.

That's the view of Igrid Gregory, who oversees the program for DHS through the Oak Ridge Institute for Science and Education.

"I think the program is working extremely well," Gregory said. "So far, we've gotten excellent reviews from both the students and the mentors. Some students have already been offered jobs; others are planning continued collaborations and some researchers are serving as school advisers."

This year's 50 scholars (undergraduate students) and 50 fellows (graduate students) were selected from among about

2,500 applicants in the 2003 DHS Scholars and Fellows Program competition.

Students who are studying the physical sciences, biological sciences, social and behavioral sciences, engineering, mathematics, and computer and information sciences are eligible to seek the awards.

Scholarships for undergraduate students are awarded for up to two years and include full tuition and fees, along with a \$1,000 per month stipend.

Graduate fellowships are awarded for up to three years and include full tuition and fees, plus a \$2,300 per month stipend.

More information about the program can be obtained from the Website: www.ornl.gov/dhsed/

dent funding opportunities it affords, but also because it has given us the chance to focus our research on homeland security," he said.

In addition to Chongsiriwatana, McCutchen-Maloney this summer has had two other DHS interns, Purdue graduate student David Schroeder and University of Wisconsin, La Crosse undergraduate Brigitte Fischer.

McCutchen-Maloney sums up her view of the trio in one word: "Fantastic."

"I was a little concerned about how much the students could learn and would be able to accomplish during the short internships, but they were really quick learners, eager and enthusiastic," McCutchen-Maloney said. "They started doing experiments and getting results within a very short time."

The Lab researcher added that she would welcome back all three students in a heartbeat as DHS scholars or fellows, postdocs or as graduate students.

Sinensky, a student at the Massachusetts Institute of Technology, is studying the interface of molecular biology and materials science in his graduate studies.

Here at the Lab, Sinensky has been researching the use of microcantilevers for detection of chemicals and biological molecules. His mentor has been Joe Tringe, a materials scientist in the Lab's Chemical, Biological and Nuclear Sciences Division.

"I think his internship has been very successful," Tringe said. "This is a difficult problem; there are many subtle effects and we're looking for one small signal among many. With

his knowledge of chemistry and biology, he's been extremely efficient and effective."

Like other DHS scholars and fellows, Sinensky said he has particularly enjoyed the once-a-week technical seminars about homeland security offered for the students.

"The DHS fellowship is an excellent opportunity. It's also very helpful to know that I'll have an employment opportunity with DHS," Sinensky noted.

Brugger's two students, who both study computer science, have been Rachel Greenstadt, a third-year graduate student at Harvard University, and Dan Wendlandt, a senior this fall at Stanford University.

"Much of my work at the Lab has overlapped with my graduate studies," Greenstadt said. "I've appreciated having the freedom to work on projects that I've found interesting."

Greenstadt has conducted survey work and researched technologies that people who live in authoritarian nations can use to circumvent Internet censorship controls.

Wendlandt's project has focused on analyzing how the paths followed by Internet traffic such as e-mail or Web downloads map onto geopolitical boundaries.

"I think my internship has been great," he said. "Often undergrad students don't get to come up with research projects, but I've been able to do that here."

Besides their internship research at the Laboratory, the scholars and fellows have gone rafting on the Stanislaus River and toured other on-site laboratories, such as the Forensic Science Center.

Other scholars and fellows who have had internships here this summer are: Derrick Speaks, University of Washington; David Smithson, UC San Francisco; Paul Baginski, UC Berkeley; Eric Peterson, California Institute of Technology; Ryan White, UC Berkeley; Ngoc Tran, UC San Diego; Brook Chuzles, University of Wisconsin, La Crosse; Daniel Hazen, UC Berkeley; and Ryan Lim, MIT.

SAIL

Continued from page 1

educate, but also to excite middle school students.

Stan Hitomi, ETEC director, explained: "We wanted to provide a summer camp for students that would make science fun."

With the help of instructors Pauline Huben, fifth-grade teacher at Livermore's Altamont Creek Elementary School, and Mark Pelham, elementary science specialist from the San Ramon Valley Unified School District, the students entered the real world of crime scene investigators from the get go.

After a brief introduction to answer "what is forensics?" and "what do investigators do?" students donned personal protective equipment and ventured outside to a mock crime scene, carefully guarded by a Lab security police officer who kept nosey spectators and inquisitive press at bay. Students measured the crime scene area, collected, packaged, and labeled samples, and headed back to the lab to analyze blood and check out fingerprints.

During the week, the young investigators



LESLIE SCHWARTZ/NEWSLINE

At a mock crime scene, students measure the area and gather evidence as part of the experiments conducted during the Science Adventure Institute at LLNL (SAIL) program.

completed hands-on activities in trace evidence, DNA fingerprinting, soil analysis, handwriting comparison, blood splattering and chromatography. In addition, they toured labs in the Biology and Biotechnology Research Program (BBRP) and heard presentations from Lab scientists about real crime cases and new techniques being developed to aid investigations.

Gena Steward, a police identification technician from the Livermore Police Department's Crime Lab, visited the group to discuss evidence from a real life crime that occurred in Livermore.

Huben said: "I think the best part of the program is the connection of the various science disciplines, as well different skills such as writing, communication, logical and critical thinking."

For Pelham, the synthesis of the week's activities was key. "The students' hard work all week in completing similar tasks done by real investigators comes together on the last day when they present their findings during a mock trial," he said. "That's when the pieces of the puzzle fit together. The kids really get into it."

Participating students had positive comments about the program.

Pleasanton eighth-grader Katie Voss believes the program was a good way for her to get back on track and ready for school. "It was fun," she said. "I would definitely come back next year."

Hitomi said he hopes future summer programs will be developed to address different topics for varied age groups.



Summer Student Calendar



Don't miss out on the final events for summer scholars coming up during the next two weeks. These tours, panels and seminars will help you end your internship with more knowledge, as well as networking skills. Visit the Student Bulletin Board at <http://education.llnl.gov/sbb/> for more information or to register for events online.

Events taking place during the week of Aug. 16-23

Tuesday
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Internships in Computer Science at the Terascale (ICST) Seminar
Erick Cantu-Paz from the Center for Applied Scientific Computing (CASC) will speak about "Solving Problems with Evolutionary Algorithms," at 1:30 p.m. in Bldg. 219, room 163. Contact: Paula Ashley, 3-3691, or Erick Cantu-Paz, 4-2467.

Wednesday
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Tour the Joint Genome Institute (JGI)
Join other interns on a tour of the Department of Energy's JGI in Wal-

nut Creek and see the Production Genomics Facility (PGF). You will be introduced to the biotechnology and learn how industrial-strength DNA sequencing can be used to solve some of the fundamental challenges of biology. Visit the JGI's Web-site at <http://www.jgi.doe.gov/>. Meet at the Discovery Center, Bldg. 651 at 8:45 a.m. Students will return to the Lab about 2 p.m. Transportation is provided. Contact: Laura O'Brien, 2-7295.

Internships in Computational Modeling at the Terascale (ICMT) Seminar
Lori Freitag Diachin from Computing Applications and Research (CAR) will present "Developing Interoperable Meshing and Discretization Components," at 1:30 p.m. in Bldg. 219, room 163. Contact: Paula Ashley, 3-3691, or Lori Freitag Diachin, 2-7130.

Thursday
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Security Seminar
Computing Applications and Research and the Institute for Scientific Computing Research invite stu-

dents to the Student Bulletin Board student summary presentations from 1:30-3 p.m. in Bldg. 219, room 163. Summer scholar Emily Eder will present "Less Computer Security" and fellow scholar Jenn Sirp will present "More Data Fusion: GUI Improvements and Optimizing the Reiser Filesystem." Contact: Paula Ashley, 3-3691, or Terry Brugger, 4-4992.



Wednesday, Aug. 25 Internships in Computational Modeling at the Terascale (ICMT) seminar
Rob Falgout from the Center for Applied Scientific Computing will speak about "Scalable Linear Solvers: Multigrid Methods" from 1:30-3 p.m. in Bldg. 219, room 163. Contact: Paula Ashley, 3-3691, or Rob Falgout, 2-4377.

Please send your summer student calendar items to Leslie Schwartz at schwartz16@llnl.gov

Technical Meeting Calendar

Friday
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INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH
"Data-Driven Approaches for Biological Networks: Inference, Organization and Analysis," by Chris Wiggins, Columbia University. 10 a.m., Bldg. 451, room 1025 (property protection area). For more information, go to <http://www.llnl.gov/casc/calendar.shtml>. Contact: Erick Cantu-Paz, (CASC), 4-2467, or Leslie Bills, 3-8927.

Tuesday
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PAT DIRECTORATE-N DIVISION
"Particle and Heavy Ion Transport Code System: PHITS," by Koji Niita, Research Institute

of Science and Technology (RIST), Tokai University. 10:30 a.m., Bldg. 543, room 2234, Tesla Room, property protection area. Contact: Larry Ahle, 2-1621.

Wednesday
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PHYSICS & ADVANCED TECHNOLOGIES /N DIVISION
"The Axion Dark Matter Experiment at LLNL," by Leslie J. Rosenberg, N Division. 1:30 p.m., Bldg. 211, room 227, badge required. Contact: Theresa Schantz, 3-0240.

Tuesday
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RADIATION DETECTION CENTER
"High Sensitivity Gamma-Ray

Imaging Using Position-Sensitive Semiconductor Detectors," by Jim Kurfess, Naval Research Laboratory. 11 a.m., Bldg. 151, room 1209 (uncleared area). Contact: Ron Wurtz, 3-8504, or Christie Shannon, 3-6683.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to tmc-submit@llnl.gov. For information on electronic mail or the newsgroup llnl.meeting, contact the registrar at registrar@llnl.gov.

A Day on the Green



Photos by Jacqueline McBride/Newsline



Ethnic displays and multicultural food filled the picnic area Thursday afternoon as the 2004 Day on the Green festival united employees of all cultures and disciplines exemplifying the theme, “Reaching Out: Connecting Across Cultures and Generations.” Two performance stages showcased a vivid array of performances such as dancers from Los Mestizos de San Jose Ballet Folklorico, as shown top left. Top right, Carolyn Cox examines African pottery in the display tent that had exhibits ranging from archival history of the Lab to beaded Saudi Arabian rugs. Ethnic flavors from Afghanistan, the Philippines, El Salvador and many other places filled the stomachs of employees. Kathleen Moody, above, makes nachos for the Lawrence Livermore Laboratory Women’s Association. “I’m pleased to see so many people celebrating our diverse cultures,” said Maureen Morley, group leader for the Worklife Programs Office. “It’s important to take a break in the midst of our busy days to reach out and connect — to de-stress and refresh. What better way to do that than at a celebration filled with music, dance, food and art?” An accordion musician, at left, performs as part of the MotorDude Zydeco Band.



JACQUELINE MCBRIDE/NEWSLINE

Poster students

The Central Café transformed into a gallery of Lab summer scholar research on Thursday afternoon. More than 130 students shared technical posters exhibiting the culmination of their summer work at the annual Student Poster Symposium, where participation nearly doubled last year’s.

At left, Dona Crawford, associate director for Computation, listens as University of Houston graduate student Abraham Bagherjeiran, explains the “Design and Implementation of an Anomaly Detector” for his work in the Institute for Scientific Computing Research.

“We’re thrilled to be able to accommodate all these students,” said Edie Rock, University Relations program administrator. “It’s always nice to see management come out and support students.”

“It’s nice having an interdisciplinary exchange of information between students,” said Jedidiah Chow, a second year summer scholar and entering freshman at UC Berkeley.



CLASSIFIED ADS

See complete classified ad listings at
<https://www-ais.llnl.gov/newsline/ads/>

AUTOMOBILES

1996 - Toyota Lancruiser, AT, pwr pack-age, new leather seats and brakes, good tires, diff. locks F/B, white, excel-lent condition, 135k miles, \$13,995 obo. 925-455-1306

1991 - Mazda MPV, 135K mi, 6 cyl, all power options, well maintained, great commute & family car, original owner - \$2300.00 415-543-3643

1999 - ACCORD 4-dr sedan. 1-owner, 36,500 miles, pampered, Raisen Pearl color, \$11,800. 925-456-5445

1985 - Ford Tempo Ugly but runs \$400 or Best Offer 925-449-7966

1969 - Street Dune Buggy, was setup for racing. Without engine. Best Offer. 925-449-5734

1988 - Ford Escort GT, GREAT condi-tion, Fun for commuting or your teenager. MUST SEE \$1500.00 209-892-2369

1995 - Infiniti G-20, 110K miles. Very reliable. Peral white, tan leather interi-or, sunroof, automatic. One owner. \$3900.00 925-838-9302

1989 - Ford Taurus. Runs good. Needs a paint job. \$750/obo. 209-814-6866

1965 - Ford Mustang,289 v8,Auto, PS,PDB,Air,Runs, Drives and Looks Excellent,Must See! \$11,500 OBO 209-823-3848

2000 - Toyota Camry CE 4D Sedan,sil-ver,perfect condition, 4cyl.,2.2L, loaded,70K miles,Auto-trans,alloy rims,CD,tinted windows,\$8,900 925-736-7507

1999 - Chrysler 300M, black with leather, custom wheels, new tires, loaded.150K miles, no damage or major engine work. \$7000 530-478-1991

1996 - Honda Prelude, VTEC. Excellent Condition, 2-door Coupe, 5-speed, great gas mileage, 110K \$7200. 925-484-2217

1996 - Ford Explorer, Eddie Bower Lim-ited Edition, Emerald Green w/sunroof, 4x4, leather interior, fully loaded, per-fect condition \$5,900.00 OBO 925-456-8857

1977 - Cadillac Eldorado - 425V8, 87k miles, receipts going back to 4k oil change, one owner from 1977-2003, runs great, \$2500 925-294-5939

1985 - Clean Cadillac Sedan Deville, Blue, all stock. Engine needs work \$299. Or donate to charity. 925-513-7416

1992 - Saturn SL2 runs very good all opp 70 k 2.500 obo 925-825-0954

1997 - Ford Explorer.Excellent condi-tion.Call me for details and work out a deal. 925-487-3368

1985 - GMC Jimmy, V8 4x4, ran great. Fairly new transmission & engine. Needs transfer case. Great for parts. Make Offer 925-550-3809

AUTOMOBILE ACCESSORIES

Delta tool box for compact truck, \$20. Adolfo 209-549-7553

NEW - Never used, 1997-99 Ford ure-thane roll pan \$150. 1997-99 Ford 150 Phantom Bumper Grill \$50. 925-550-3809

RIMS/TIRES-4, keystone Classics 14x6, unilug pattern, Tires BFG radial TA, 245/60-14. All with good tread. \$300.00 925-352-4248

Top Deck Fiberglass Tonneau Cover. Currently on 2003 Chevy shortbed. Excellent condition. \$600 OBO. 209-838-3279

BICYCLES

Raleigh Record 10 speed, \$125. Wom-ens Equator mountain bike, \$45. Both in good condition and great for stu-

dents. OBO. 925-784-3731

Centurian Mixte road bike,\$95; Dia-mondback BMX 20in bike, \$65; Red 16in training bike, \$25. 925-443-3106

Road Bike, EDDIE BAUER,1yr old Al frame, 27 speed, shock absorber, plus extras. Like new. \$150 or best offer 925-935-5004

BOATS

Water skis - Pair SuperKid 48in skis \$50; 71in flatbottomed slalom training ski \$35, 4 vests \$15 each. All for \$125 925-634-9976

9.9hp nissan outboard, Low hours. \$300. 925-367-3251

CAMERAS

Rollei TLR Model DBP DBGM W/Schneider Xenotar 80/2.8 lens and filters. Rollei Leather case extras. \$550/offer 925-443-9599

ELECTRONIC EQUIPMENT

Gateway 300 computer, 1.4 GHZ, 128 MB SDRAM, 20 GB HD, Windows XP, CD ROM/floppy drives, 15 inch moni-tor, keyboard, mouse, speakers, soft-ware. \$350 925-846-3653

TV, Color, 22 in. Panasonic, works great, \$75.00 or BO. VCR, RCA \$25.00 or BO, Disney movies, VHS, \$5.00 ea 925-447-2611

Color TV 21 inch Proscan with remote and black wood TV shelved stand. Excellent condition, like new. \$150. 925-648-0671

CB Radio 40 channel, Radio Shack 1998, car adaptor, works great \$25 925-784-5850

PalmPilot w/fullsize folding keyboard. Access internet/Emails/meetingmaker. New condition, all manuals/software. \$50.00 925-516-9510

GIVEAWAY

3 work-bench type storage cabinets for the garage, lots of drawers. 925-449-3499

BISSELL Big Green Power Brush Carpet Cleaner, cannister style, used ten times. 925-606-7929

Free 7 foot pine tree in ~24in pot. A bit scrawny - needs to be planted in the ground. Can deliver to lab. 925-828-2208

Book for advanced Scrabble player, entitled Word Freak. 925-447-3809

HOUSEHOLD

ANTIQUE MAHOGANY CHINA CABI-NET. Bow front glass doors on top. Three drawers, two cabinets on bottom. Excel cond. Pictures avail. 925-513-1108

Long, tall glass-topped oak table for behind couch or along wall. Great con-dition. \$65. Lower oak table with shelves. Great condition. \$40 925-513-4767

Dinning set - 4 Breuner chairs, like new with cushions and expandable modern dinning table. All for \$80 415-543-3643

Beautiful glass dinning table with mar-ble stand for seating of eight people, only \$50.00 925-321-2753

Oak Hall tree w/ mirror. Good condi-tion. \$75.00 OBO 925-449-0838

Entertainment center, Oak, 6 ft. high, 5 ft. wide, 16 in. deep, open shelves, Good condition, \$125 925-447-2611

2 Contemporary Tan Italian Leather loveseats, 1yr New,. Excellent Condi-tion. Asking \$1000.00 for set or B.O. 925-872-6448

Matching oak glass-topped hexagonal end table and tall, long, wall or behind

couch table, \$100 for both. Great con-dition. 925-513-4767

Wicker bedroom set perfect cond. \$375 or BO. 1930 Mahogani Dinning room,table and cradensas great cond. Retailled \$2000-make offer! 209-838-3950

Minifrig - Black with grey door. Used for one year. Great shape. Would be great in Dorm room \$100. 925-784-3731

Low Chow Table. Rosewood, 42 inch-es. Old Chinese. \$200. Two arm-chairs,ex. cond. Ivory denim covered. \$150 each. 925-443-3447

Maytag washer and dryer \$45.00 each 925-846-5389

Microwave Oven Sharp, New in box Stainless Steel, Model#R-414HS \$75.00 925-212-7231

Desk, solid oak, light color, large teachers style, heavy, large 3X5, good condition, some marks, \$30 obo 925-784-5849

Whirlpool 10,000 BTU window air conditioner w/mounting bracket. Cost \$250. Now \$150 obo. Table/4 chairs, walnut stain. Nice! \$200. 925-634-9976

Table lamps, two, heavy brass bases with shades, three way switch, excel-lent condition \$50.00 for both. 925-829-2581

Georgous 3yr.old Osterbed CalKing \$1200new sale4 \$250, 2dressers dark \$40ea., Maple Glider&ottoman \$100, nightstand \$20 925-455-8455

KENMORE ELECTRIC DRYER: Extra Capacity Plus, 9 yrs old, works great! Shoe rack incl. \$100.00 209-321-7203

3 piece couch set for sale. Worn and old. no tears.love seat,hide away,reclin-er. Great starter set. \$200 OBO 925-443-3418

FURNITURE - Recliner; chair w/ ottoman; loveseat, matching chair; cof-fee & sofa tables; sml. desk; china cab; shelves; lamps. 925-513-1108

Baby Crib and mattress, light wood, like new \$150 or best offer. 209-239-2039

MISCELLANEOUS

Kool Stride Lil Deuce Double Jogger in excellent condition. Best jogger made. Includes rain shield. \$200.00 925-447-1977

Yard Sale, Sat. August 14th from 8-12p.m. 5676 Shorehaven Circle Liver-more, CA 94550 Entertainment center, household items, etc. 925-960-0543

Patio set, oval glass top table, 4 barrel chairs w/pads, green, metal,good con-dition \$150 or BO. Two rocking patio chairs, \$25.00 ea, sm table \$10. 925-447-2611

Outdoor Lights, Weathered Brass \$10 each: 5pcs @ 8x14; 2pcs @ 9x20; 1 post light 9x13; 5 pcs double spot alu-minum @ \$3 each 925-447-9969

Older QLT system, includes stock, hat press, shirt press, mug & button press-es. Call for info, Best Offer. 925-449-5734

Pirate Ship Toy Box by Todays Kids. Excellent condition, like new. Can send e-photos. \$35. 209-833-9141

2 tickets to Cal Football home game Sept.11 vs New Mexico State. 1/2 face value (about \$15 ea.) Great location! 925-443-4844

2 Josh Grobin tickets for 8/25/04, Chronicle Pavillion, Concord. \$76 per ticket. Section 207, row EE, seats 7 and 8, 925-447-3432

Bricks, used antique, 25 cents each, unused modern, 15 cents each, dis-count for the lot; you pick and haul. 925-443-3106

Hedstrom swingset - \$20 925-901-0333

Kodak rotary slide trays, four for

\$12.50. 925-447-3809

MOTORCYCLES

1995 - Leather Jacket hardly worn Hein Gericke XXL cruiser styling black snap in liner elbow guards very nice \$450 new \$100 obo 408-712-1731

2004 - BMW 1150GS,700 Miles,New Condition,ABS, Heated Grips,Loaded With Extras,To Much To List,Over \$22,000 Invested,Sac.\$14,000 OBO 209-823-3848

1990 - Kawasaki ZX-10 Ninja. Clean 25K miles. \$3K, OBO. 925-449-0838

1979 - Puch, Vespa like motorbike,all parts are there. Needs a bit of work.\$100/OBO 925-292-0134

MUSIC INSTRUMENTS

Cymbal bag. Heavy duty with divider inserts. Great condition! \$ 30.00 925-373-6255

Drum pedal. Tama, Iron cobra,power-glide, double pedal. Great condition! \$185.00 925-373-6255

Petite Baby Grand Piano, 4ft 8 in. Good condition, natural wood finish, bench included. \$1200 firm. 925-485-0288

PETS & SUPPLIES

Pet Guardian underground electronic fence. Comes with two collars. \$40.00 925-447-1977

Quarter & Arabian Horses for sale, tack, horse cart, pony carts. Call for info. 925-449-5734

Horse boarding, near Pleasanton fair-grounds, feed twice daily, large shaded paddocks with stall \$200, roomy shad-ed pasture, \$175, no barb wire 925-784-5850

Kitty, 9yrs old, indoor, solid black. Loves to talk. Dog has tried to eat her so she is CONFINED to one room of the house pls help SAVAGE. 209-404-9797

RECREATION EQUIPMENT

Speed Bag with accessories \$25.00 or BO. Body by Jake Bun and Thigh Trim-mer \$50.00 or BO. 925-447-2611

Tennis rackets by Head: iSpeed and iTour. 41/2 inch grips. New string. Excellent condition. Both are current models. \$45 each. 925-838-9302

Kayak- Necky Spike sit-on-top. Comes with rudder, paddle, seat and vest. Front storage hatch, tank well, small hatch in center. \$700.00 obo 209-836-1665

Kelty youth mummy style sleeping bags (2), infrequently used, \$65 each. 925-443-3106

Coleman tent - Sleeps 4, 10ftx8ft, 74in center height. Excellent condition. New \$130, now \$50. 925-634-9976

RIDESHARING

Express your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsm>.

Cupertino Area - Looking to join a carpool as a rider/driver. AWS M-Th 7:15am-5:00pm, Fri 7:15am-4:00pm. 408-438-1784, ext. 4-4527

LIVERMORE - Seeking a ride from So. Liv-ermore Ave. infront of new Livermore Library, to Lab. Will pay accordingly for your service. 925-449-1718, ext. 2-7448

San Jose /West - Looking to join a carpool as a rider/driver. 9/80, off Friday. Non-Smoking. 408-268-7924, ext. 2-9107

SERVICES

Special Olympics Soccer season starts Sunday, Sept 12th for ages 6 to 16.1 For

information 925-373-6468

Swim Lessons - Experienced, former LLESA instructor and CSUH graduate: all ages; your home or mine. Certifica-tions. \$50 for 4 lessons 30 min. each. 209-835-5031

Openings at Angies Family Daycare for children ages 1-3. Located in Spring-town. 925-443-6549

SHARED HOUSING

Livermore - Share 3bd/2ba home quiet neighborhood. Private bath, garage park., patio landscaped backyard, pool w/waterfall. Non-smoker. Avail. immed. \$800 Marci 925-456-2950

Out of towners or not, room for rent in Livermore with small kitchen + full bath \$ 600. a month 925-455-8043

Livermore - Room to rent. \$500 mnth & 1/2 util. Inside laundry. Close to LLNL and dwntwn. Semi-private bath. Full kitchen. No pets. Prefer 25+ age. 925-449-0305

Tracy - Share home in Tracy \$625 plus 1/3 utilities. Brand new home in nice neighborhood. Walking distance to the ACE train. Own bedroom, full ameni-ties. 415-812-1098

Pleasanton - house, 2 bdrm 1 bath, 1 acre, N/S, \$500, horses welcome \$200 and \$175 for large shaded paddocks/ stalls or pasture, fed twice daily 925-784-5850

TRUCKS & TRAILERS

1994 - Chevy P/U, stepside, ext.cab, 4x4, Z71, white w/grey int. CC, P/S, P/W, P/L, shell, beadliner. Orig. owner 173K highway miles, 6300.00 or OBO 925-443-5008

1999 - Dodge Durango SLT 4 x 4, fully loaded with brand new tires and ball joints. \$11,500. 925-648-0671

1992 - GMC Jimmy TYPHOON, rare, one of 2200 made, V-6 turbo, 4WD, 285 hp, white, needs some TLC, was \$30K new, first \$12K takes 925-455-6174

1953 - Ford F-100, Chevelle front clip, Firebird rearend, rebuilt small block Chevy and transmission, project truck comes with extra parts, \$3,500 OBO. 925-447-4161

1964 - Dodge Truck, 1/2 Ton, 360 V8, Al, good tires, runs good. Fair Condi-tion \$800.00 OBO Please leave a message. 925-449-1526

VACATION RENTALS

Soda Springs, CA - Charming 1 BD + loft condo in Old Soda Springs Station. Sleeps 4-5. Fully equiped. Beautiful views, close to lots of activities. 415-927-4415

San Diego Area (Carlsbad), - Grand Pacific Palisades, Gold Crown Resort. 3 BR Condo w/Full Kitchen. 2 Pools. 12/19-26/2004. \$900/week or 12/22-26 for \$575 925-449-6048

Gualala, Mendocino Co - Stunning Whitewater Ocean Views. 2 bedroom home walking distance to restuarants, shops and spa. Hot tub/gas BBQ. 7th night free, \$511/2 nights 925-606-1845

WANTED

Roofer/Handyman to repair dry root in eaves over front porch. Reasonable. Livermore. 925-449-4963

Looking for guitars(acustic), also WAKEBOARDS for cheap! Any wake-boarders or guitars. 925-447-2331

Washer and dryer (working), twin bed-ding, pillows, and blankets for Brent-wood womens home. 925-382-4478

Looking for some Ford stock or semi nice rims for my sons 70 Ford pickup. Will pay up to \$100. Please no Tires. 209-833-7149

NILE

Continued from page 1

states, including California.

In most areas where the virus is found, only 1 percent of the area’s mosquitoes even carry the virus, so the risk of contracting WNV is very low. Less than 1 percent of people bitten by infected mosquitoes develop serious complications. The majority of those infected develop flu-like symptoms, or no symptoms at all. At highest risk are the elderly and, theoretically, people with weakened immune systems (e.g., those undergoing cancer treatment, organ donor recipients, HIV and AIDS), although this has yet to be determined. It is important that everyone protect themselves from mosquito bites to minimize the risk of infection.

In the United States and other temperate areas of the northern hemisphere, transmission occurs from June to November, peaking between late August and early October. In areas of more tropical climate, year-round transmission is possible.

Mosquitoes become infected when they feed on infected birds. In the 1999 New York area epidemic, there was a large die-off of American crows. Since then, West Nile virus has been identified in more than 100 species of birds found dead in the United States. Most of these birds were identified through reporting of dead birds by the public.

Preventive measures include insect precautions, especially when outdoors at dawn or dusk in an area of risk. Reduction of mosquito breeding places by eliminating any standing water outdoors

Taking precautions against WNV

California’s county health departments have taken precautions to reduce the spread of West Nile Virus (WNV).

Alameda County has an extensive surveillance program that includes mosquito trapping, catch basin sampling, sentinel chickens, dead bird reporting, and horse surveillance.

To see what your county is doing to reduce the spread of WNV, contact the county health department or visit their Websites at:

- Alameda County: (510) 567-6800 or online at: http://www.acvcsd.org/west_niles_virus/information.htm
- Contra Costa: 1-888-959-9911, or online at: http://www.cchealth.org/public_health/west_nile.html
- San Joaquin: (209) 982-4675, 1-800-300-4675, or online at <http://www.co.san-joaquin.ca.us/oes/westnile/westnile.htm>

If you have any WNV-related questions or concerns, contact Health Services at 2-7459, nurse practitioner Keith Sheirich, 3-6653 or Dr. Richard Watts, 4-4513.

is an important step in preventing this disease. Fogging or mass spraying has been shown to be of little benefit.

Personal factors that should be used include:

- Wear light-colored clothing that exposes as little skin as possible.
- Avoid scented perfumes, lotions or soap.
- Avoid outdoor activity at dawn and dusk.
- Apply insecticide that contains DEET (concentration 30 percent to 35 percent). The DEET preparation should be applied to all exposed non-

sensitive areas of the body. Frequent application helps to ensure continuous protection. Note: Avoid use of DEET on children.

- Use permethrin on clothing. Permethrin-containing products are available at stores that carry sporting goods and/or camping or other outdoor supplies.
- Ensure that all open windows have insect screens. Repair window and door screens to prevent mosquitoes from entering buildings. Permethrin-treated window screens may also provide additional protection.
- When sleeping outdoors, use a smoldering pyrethroid coil to help reduce flying insects.
- Horses are very susceptible to WNV. Horse owners are advised to contact their veterinarians to have their horses vaccinated.
- Drain all sources of standing water where mosquitoes can breed. Residential sources are often the number one source of mosquitoes. Your local health department may be able to provide you with mosquito larva-eating fish for placing in any standing bodies of water on your property.

For the latest developments in WNV, see the following Centers for Disease Control Website: <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>.

The public can report birds (e.g. crows, ravens, magpies, jays) that have been dead for less than 48 hours to the California Department of Health Services’ (CDHS) toll-free hotline, 1-877-WNV-BIRD, or use the online reporting form on CDHS’ Website www.westnile.ca.gov. There is no evidence that a person can get the virus from handling live or dead infected birds. However, you should avoid bare-handed contact when handling any dead animals and use gloves or double plastic bags to place the carcass in a garbage can.

HYDROGEN

Continued from page 1

energy technologies for transportation, including hydrogen fuel, for more than a decade. Hydrogen-fueled vehicles are more efficient and cleaner than gasoline or diesel vehicles. In addition, production of hydrogen from carbon-free sources, such as nuclear or renewable energy, is probably the most efficient and economical way to achieve deep cuts in carbon dioxide emissions.

Salvador Aceves, associate program leader for energy efficiency and renewable energy in the Energy and Environment Directorate, heads up the team that developed the new hydrogen storage system.

“The energy system as it is now is very nice,” Aceves said. “We basically have an unlimited supply of energy at a very low cost to satisfy all our transportation, industrial and residential needs.

“But there are also many problems related to our use of energy,” he said. “Environmental pollution, dependence on foreign oil and global warming (primarily caused by carbon dioxide emissions) are very serious problems. We may not be able to completely solve them in the short term, but at least we can reduce them to where they cause the least possible damage.”

Aceves and his team focused on overcoming one of the major barriers to practical hydrogen-fueled vehicles: on-board storage. While hydrogen fuel is more efficient and generates less air pollution and greenhouse gas emissions than gasoline or diesel fuel, it’s

difficult to store in the quantities needed to provide the range and performance of today’s fossil fuel-powered cars and trucks.

To solve that problem, the Livermore team developed a safe, compact hydrogen storage tank that combines the around-town energy efficiency of conventional compressed hydrogen gas with the long-distance driving range of cryogenic (low-temperature) compressed gaseous or liquid hydrogen.

“The big thing about our system is that it’s a cryogenic compatible pressure vessel that can store the two kinds of hydrogen, cryogenic and compressed,” Aceves said.

Room temperature compressed hydrogen is easier to obtain and store than the cryogenic variety, but it requires too much storage volume to be practical for trips longer than 150 to 200 miles. On the other hand, Aceves said, a tank holding five kilograms of liquid hydrogen is compact enough to fit in a vehicle, and when installed on a high-efficiency vehicle — powered by either a hydrogen fuel cell or an internal combustion engine — would provide a driving range of 300 to 500 miles.

There’s a downside, however. It takes a lot of energy to liquefy hydrogen — “about 65 kilowatt-hours of electricity to liquefy five kilograms of hydrogen,” Aceves said. In addition, liquid hydrogen has a tendency to expand and evaporate if warmed by only a few degrees.

Aceves and his team tackled both problems by developing an insulated hydrogen storage system that can simultaneously accommodate the two forms of

hydrogen fuel. A vehicle equipped with the hybrid Livermore tank could rely on room temperature compressed hydrogen for short trips, and tap into the cryogenic hydrogen for longer excursions.

Backed by funding from the Department of Energy and California’s South Coast Air Quality Management District, Aceves and his team installed their system in a pickup truck provided by the Sunline Transit Agency of Riverside County, Calif. After several weeks of testing the system using compressed hydrogen, the team filled the tank with liquid hydrogen last week, checked to make sure there were no leaks, and started driving the truck around the Laboratory.

“We probably put at least 300 miles on it just around the site,” said team member Tim Ross, an engineering associate with Lab contractor Johnson Controls. “Everybody wanted to drive it.”

Having successfully completed its initial field testing, the truck is being shipped today to Sunline Transit, where it will undergo six months to a year of on-road testing. Ross said Sunline will use the truck to shuttle bus drivers back and forth in the Palm Springs area.

“We proved that it works and it’s safe,” Ross said of the project. “We’re quite happy with it.”

Aceves attributed the success of the project and expressed his appreciation to cryotank team members Ross, Gene Berry, Francisco Espinosa-Loza, Tim Ford, Jim Fugina, Fernando Luna, Joel Martinez-Frias, Mark McCuller, Glenn Rambach, Vernon Switzer and Thomas Vi.

GREENVILLE

Continued from page 1

During the road closure, there will be no anticipated effect to ACE train schedules.

The city’s designated detour route around the immediate construction area recommends that drivers exiting Interstate 580 at Greenville, turn south/right on Las Positas Road, left on Vasco Road, left on Patterson Pass Road and right on Greenville Road.

However, to minimize traffic delays caused by construction detours on Greenville Road, the Lab’s Traffic Safety Committee recommends that employees choose alternate commute routes and allow 20–30 minutes additional commute time to get to and from LLNL during the construction. Several suggestions

follow:

- Eastbound on I-580 — Exit First Street, continue southbound on First, then left on Mines Road, left on Patterson Pass Road, right on Greenville Road.
- Eastbound on I-580 — Exit First Street, continue southbound on First, then left on Mines Road, left on Patterson Pass Road, right on South Vasco Road.
- Eastbound on I-580 — Exit First Street, continue southbound on First, then left on Mines Road, left on East Avenue.
- Eastbound on I-580 — Exit North Livermore, continue southbound on North Livermore, then left on First Street, right on Mines Road, left on Patterson Pass Road, right on Greenville Road.
- Eastbound on I-580 — Exit North Livermore, continue southbound on North Livermore, then left on First Street, right on Mines Road, left on Patterson Pass

Road, right on South Vasco Road.

- Eastbound on I-580 — Exit North Livermore, continue southbound on North Livermore, then left on East Avenue.
- Westbound on I-580 — Exit Greenville Road, turn left on Northfront Road, continue to North Vasco Road, left on North Vasco Road and over the freeway.
- Westbound on I-580 — Exit Grant Line Road (north/right), left on Altamont Pass Road, continue past Greenville Road intersection, and continue west on Northfront Road. [Altamont becomes Northfront] to North Vasco Road, then left on North Vasco Road and over the freeway.

Laboratory mailers will be sent out prior to the closure with details and alternate commuter routes. Details also will appear in future editions of *Newsline* and *NewsOnLine*.



THE BACK PAGE

Lab prepares next generation of researchers

By Leslie Schwartz
NEWSLINE STAFF WRITER

A wealth of opportunity awaits the budding population of young scientists and engineers who have come to work at the Lab as summer scholars.

The combined efforts of the Institutional Education Committee, in conjunction with multiple departments at Livermore and Sandia labs, bring educational seminars, discussion panels and similar events to summer interns. The valuable information and practical principles these students gain can then be directly applied to their summer position, as well as to their future careers as scientists and researchers.

“We provide our summer students a high-speed journey through Livermore, so that they are exposed to our culture, our passion for mission, our science and technology vitality and are welcomed as new members of the science and engineering community,” said Laura Gilliom, director of the Lab’s University Relations Programs. “Concurrently, they are offered opportunities to meet one another, to explore the Bay area and to enhance their professional skills.”

Key topics in science, such as ethical concerns, professionalism in the workplace and educating the next generation of researchers are among the many seminars offered to summer interns. UC Davis’ Alexandra Navrotsky spoke to students on the importance of being aware of ethical matters in science and research. Her talk focused on ethical concerns relating to the four areas of plagiarism, small dishonesties, collaborative work and reviewing work of colleagues, and highlighted real-life scenarios where these instances actually occur.

“A good part of ethics is being honest with

yourself. It is really those everyday decisions that give your career its flavor. You want to be able to look back and say ‘I’m proud of what I’ve done,’” Navrotsky said.

Interns also learned how to build professionalism through appropriate forms of communication in the workplace in another workshop. Business and communication etiquette speaker Shirley Wiley from Etiquette & Company spoke to interns about the power of professionalism in the areas of projecting a professional and confident image and developing interviewing and communication skills while avoiding the 20 most common business etiquette mistakes.

“You won’t be applying for jobs in the future, you will be competing for them,” Wiley said. “You create your professional image. You send out the symbols. You are in control. You want to project confidence and competence.”

According to Wiley, technical skills only account for 15 percent of what interviewers look for while people skills dominate the decision making process, counting for 85 percent. The “ability to project a professional image, adapt to change, and excel in an ethics driven workplace” are what make the difference in hiring decisions. “We’re talking about life skills here, too.”

Interns also had the opportunity to practice their new skills over a buffet lunch, as seminar coordinator Susane Head commented: “It’s wonderful to see future scientists really using their communication skills effectively.”

Another panel discussion on “Careers/Challenges for Young Researchers” offered interns the opportunity to network with professionals from diverse disciplines. The interactive panel session facilitated by James McGraw, deputy director of the Institute for Scientific Comput-

ing Research, was made up of Susan Fortson (Biology and Biotechnology Research Program, Health Effects Genetics Division), Karla Armstrong (Remote Sensing Group, Sandia National Laboratory), Gary Kumfert (CAR, Center for Applied Scientific Computing), and Brad Pesavento (BBRP, Computational and Systems Biology Division).

Students asked questions on everything ranging from the panel members’ prior internship experience to how to handle being a new hire at a national laboratory. “I think an internship is one of the best things you can do. You really get to see what it’s like and meet people and build connections,” Fortson said. Pesavento added, “Internships help you know what your strengths are and help you to focus your goals.”

The panelists shared valuable tips such as researching who is going to be interviewing you and having the ability to set clear goal areas for future research and projects once you’ve been hired. “Your education doesn’t stop when you leave school. That’s just the starting point,” McGraw said.

In his experience with the summer program, Barry Goldman, the Critical Skills Internship manager at the Lab, has found that “students learn about areas of research they didn’t even know existed and it sparks their interest towards these areas, resulting in students applying to graduate school. For many summer interns, this is the first career/education related experience and the various events allow the students to transition into the work environment, establishing their work habits and ethics.”

“There is a big need for young scientists at the Lab,” Pesavento added.

Rocket-propelled protest



DAVID SCHWOEGLER/NEWSLINE

Carrying signs and props, protesters marched Sunday afternoon from Jackson Elementary School to the Lab entrance at Vasco and East avenues in remembrance of the Hiroshima bombings. About 250 protesters chanted, linked hands and marched while holding an inflatable plastic missile. There were no arrests. On Monday morning, 63 protestors marched from Vasco and Patterson Pass to shut down the Westgate entrance. The gate was reopened by 9:45 a.m., and 23 protesters were arrested for blocking a public roadway.



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